Listing of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A motion sensor ~~mounted on an assembly isolated from vibrations by suspension members, wherein the motion sensor comprises~~ comprising:

    an assembly having suspension members, the suspension members isolating the assembly and components mounted on the assembly from vibrations and passing digital signals between at least one component mounted on the assembly and an external controller not mounted on the assembly;

    a vibrating member mounted on the assembly; ~~and~~

    a sensor mounted on the assembly for detecting movement of the vibrating member in response to rotation of the assembly, the sensor outputting an analog signal responsive to the rotation of the assembly; and

    digital electronics mounted on the assembly and coupled to the sensor and the suspension members, the digital electronics receiving the analog signal from the sensor and transmitting, through at least one of the suspension members, digital data indicative of the rotation of the assembly to the external controller.

    ~~wherein the sensor is electronically coupled to the suspension members.~~

2. (canceled)

3. (currently amended) A motion sensor as in clam ~~2~~ 1 wherein the at least one suspension member is a conductive helical spring.

4. (currently amended) A motion sensor ~~gyroscope~~ as in clam 3 wherein the digital data is communicated serially using a digital communication protocol.

5. (currently amended) A motion sensor ~~rate gyroscope~~ as in claim ~~2~~ 1 wherein the digital electronics stores a calibration value and calibrates the digital data in response thereto.

6. (original) A motion sensor as in claim 5 wherein the calibration value is generated external to the digital electronics and transmitted to the digital electronics digitally over at least one of the suspension members.

7. (original) A motion sensor as in claim 5 wherein the calibration value is generated by the digital electronics.

8. (canceled)

9. (currently amended) A motion sensor as in claim ~~2~~ 1 wherein the digital electronics stores a digital value transmitted over at least one of the suspension members that controls the amplitude of vibration of the vibrating member.

10. (currently amended) A motion sensor as in claim ~~2~~ 1 further comprising a driver coupled to the vibrating member, wherein the digital electronics stores a digital value transmitted over at least one of the suspension members that controls the start-up frequency of the driver.

11. (original) A motion sensor as in claim 7 wherein the digital electronics includes an auto-calibration loop that determines the calibration factor and wherein the digital electronics further stores a digital startup value transmitted over at least one of the suspension members that seeds the calibration factor at startup.

12. (canceled)

13. (canceled)

14. (canceled)

15. (canceled)

16. (canceled)

17. (canceled)

18. (canceled)

19. (canceled)

20. (canceled)

21. (canceled)

22. (currently amended) A rotational rate gyroscope ~~mounted on an assembly isolated from~~ ~~vibrations by helical springs, wherein the gyroscope comprises~~ comprising:

     an assembly having helical springs, the helical springs isolating the assembly and components mounted on the assembly from vibrations and passing digital signals between at least one component mounted on the assembly and an external controller not mounted on the assembly;

     a vibrating member mounted on the assembly;

     a sensor mounted on the assembly for detecting movement of the vibrating member in response to rotation of the assembly, the sensor outputting an analog signal responsive to the rotation of the assembly; and

     digital electronics mounted on the assembly and coupled to the sensor ~~for providing~~ ~~digital data responsive to rotation; wherein the digital data is transmitted through at least one of~~ ~~the helical springs~~ and the helical springs, the digital electronics receiving the analog signal

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from the sensor and transmitting, through at least one of the helical springs, digital data indicative of the rotation of the assembly to the external controller.